

Amendment and Response

Serial No.: 09/835,725

Confirmation No.: 7044

Filed: 16 April 2001

For: PERFORATED FILM CONSTRUCTIONS FOR BACKLIT SIGNS

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Remarks

The Office Action dated 29 August 2002 has been received and reviewed. Reconsideration and withdrawal of the rejection are respectfully requested.

Claim 10 has been amended to correct a typographical error. The amendment does not narrow the scope of claim 10 and no new matter has been added.

Claims 1-28 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,939,168 Andriash (hereinafter "Andriash"). Applicants traverse the rejection and the assertions presented in support of it as follows.

Andriash teaches a perforated film that includes a retroreflective layer used to enhance brightness of images located on the front surface of the film. In addition, the films may include a second image on the back surface of the film that can be seen by a viewer on the front surface when the backlighting conditions meet certain conditions.

Claims 1-28 recite film constructions that include a front surface, a back surface, a plurality of perforations distributed over the film, and opaque land area separating the plurality of perforations. Each of independent claims 1, 11, and 20 recites "wherein at least about 50% of normal incident light directed at the land area on the back surface of the construction is reflected." Independent claim 10 recites "a layer of reflective adhesive proximate the back surface of the construction, wherein the reflective adhesive reflects at least about 50% of normal incident light directed at the land area on the back surface of the construction."

The rejection of claims 1-28 is premised on the assertion that "[a]s the structures [of Andriash] are similar the amount of reflection is taken as being the same." Applicants respectfully submit that the assertion is not supported by Andriash. As a result, a proper *prima facie* case of obviousness has not been established.

Not only is the assertion identified above not supported by Andriash, a review of the cited reference reveals numerous teachings that contradict the assertion. For example, Andriash explicitly teaches that in nearly every embodiment, the back surface of the constructions include a "dark colored adhesive" used on what would be the back surface of the film. See, e.g., Andriash, Col. 5, lines 13-15 and Figures 2-6.

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In contrast, the present invention (as recited in the claims) requires a minimum amount of reflectivity on the back surface of the film. Such reflectivity could not be provided by a film construction including a "dark colored adhesive" on its back surface.

Furthermore, Applicants traverse any assertion that Andriash teaches or suggests a film having a reflectivity as claimed in combination with perforations that occupy 10% to 35% of the film surface. As noted in the specification (including examples and comparative examples), the films and backlit signs constructed with the films provide measurable advantages in brightness over conventional designs. Those advantages are provided by the combination of back surface reflectivity and the amount of area occupied by the perforations in the films. As a result, the disclosure of perforations occupying 10% to 68% of the area of the films in Andriash cannot, without more, be relied on as the basis for a *prima facie* obviousness rejection of claims 1-28.

Furthermore, Applicants note that the Office Action does not address how or why one of skill in the art would reach the specific film constructions recited in many of the claims based on the teachings of Andriash (as would be required for a proper *prima facie* obviousness rejection). For example, independent claim 10 and dependent claims 5 recite the use of a "reflective adhesive" that is in direct conflict with the explicit teachings of Andriash regarding the use of a "dark colored adhesive." Dependent claims 7-9, 17-19, and 26-28 also recite various constructions including white layers that can be used to provide the claimed reflectivity on the back face of the film. No such teachings or suggestions can be found in Andriash.

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Summary

It is respectfully submitted that the pending claims 1-28 are in condition for allowance and notification to that effect is respectfully requested. The Examiner is invited to contact Applicants' Representatives, at the below-listed telephone number, if it is believed that prosecution of this application may be assisted thereby.

Respectfully submitted for

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29 NOVEMBER 2002

Date

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CERTIFICATE UNDER 37 CFR §1.8:

The undersigned hereby certifies that this paper is being transmitted by facsimile in accordance with 37 CFR §1.6(d) to the Patent and Trademark Office, addressed to Assistant Commissioner for Patents, Washington, D.C. 20231, on this 29th day of November, 2002, at

2:35 p.m. (Central Time).By: Richard Gebhardt - GebhardtName: Richard Gebhardt - Gebhardt

**APPENDIX A - SPECIFICATION/CLAIM AMENDMENTS
INCLUDING NOTATIONS TO INDICATE CHANGES MADE**

Serial No.: 09/835,725

Docket No.: 55788US003

Amendments to the following are indicated by underlining what has been added and bracketing what has been deleted. Additionally, all amendments have been marked in bold typeface.

In the Claims

For convenience, all pending claims are shown below.

1. A generally planar film construction comprising
a front surface and a back surface, the construction comprising a thickness between the front surface and the back surface;
a plurality of perforations distributed over the construction, wherein each perforation of the plurality of perforations transmits light through the construction, and further wherein each perforation of the plurality of perforations comprises a uniform cross-sectional area throughout the thickness of the construction;
opaque land area separating the plurality of perforations; and
a layer of adhesive proximate the back surface of the construction;
wherein the plurality of perforations occupy about 10% to about 35% of the front and back surfaces of the construction, and wherein at least about 50% of normal incident light directed at the land area of the back surface of the construction is reflected.
2. The construction of claim 1, wherein at least about 80% of normal incident light directed at the land area on the back surface of the construction is reflected.
3. The construction of claim 1, wherein each perforation of the plurality of perforations comprises a uniform size and shape.

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4. The construction of claim 1, wherein the plurality of perforations are distributed in a selected pattern over the construction.
5. The construction of claim 1, wherein the adhesive comprises a reflective adhesive that reflects at least about 50% of normal incident light directed at the land area of the back surface of the construction.
6. The construction of claim 1, wherein the opaque land area comprises an absorptive material that provides opacity by absorption of light incident thereon.
7. The construction of claim 1, wherein the construction comprises a color layer attached to a white intermediate layer, wherein the color layer forms the front surface of the construction and the white intermediate layer forms the back surface of the construction.
8. The construction of claim 7, wherein the color layer comprises a black polymeric film attached to the white intermediate layer.
9. The construction of claim 1, comprising a non-black color layer attached to a black intermediate layer, and further wherein the adhesive layer reflects at least about 50% of normal incident light directed at the land area of the back surface of the construction.
10. (ONCE AMENDED) A generally planar film construction comprising
a front surface and a back surface, the construction comprising a thickness between the front surface and the back surface;
a plurality of perforations distributed over the construction, the plurality of perforations occupying about 10% to about 30% of the front and back surfaces of the construction, wherein each perforation of the plurality of perforations transmits light through the construction, and further wherein each perforation of the plurality of perforations comprises a uniform cross-

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sectional area throughout the thickness of the construction;

opaque land area separating the plurality of perforations; and

a layer of reflective adhesive proximate the back surface of the construction, wherein the reflective adhesive reflects at least about 50% of normal incident light directed at the land area of the back surface of the construction[;].

11. A sign face capable of having one appearance under light ambient lighting conditions, and another appearance when back lit and under dark ambient lighting conditions, the sign face comprising:

a substrate comprising a first surface and a second surface;

a film construction attached to the first surface of the substrate, the construction comprising:

a front surface and a back surface facing the first surface of the substrate, the construction comprising a thickness between the front surface and the back surface;

a plurality of perforations distributed over the construction, wherein each perforation of the plurality of perforations transmits light through the construction, and further wherein each perforation of the plurality of perforations comprises a uniform cross-sectional area throughout the thickness of the construction; and

opaque land area separating the plurality of perforations;

wherein the plurality of perforations occupy about 10% to about 35% of the front and back surfaces of the construction, and wherein at least about 50% of normal incident light directed at the land area of the back surface of the construction is reflected.

12. The sign face of claim 11, further comprising a diffuser attached to the second surface of the substrate.

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13. The sign face of claim 11, wherein the substrate diffuses light transmitted therethrough.
14. The sign face of claim 11, wherein at least about 80% of normal incident light directed at the land area on the back surface of the construction is reflected.
15. The sign face of claim 11, wherein the film construction is adhesively attached to the substrate.
16. The sign face of claim 11, wherein the opaque land area comprises an absorptive material that provides opacity by absorption of light incident thereon.
17. The sign face of claim 11, wherein the construction comprises color layer attached to a white intermediate layer, wherein the color layer forms the front surface of the construction and the white intermediate layer forms the back surface of the construction.
18. The sign face of claim 17, wherein the color layer comprises a black film attached to the white intermediate layer.
19. The sign face of claim 11, wherein the construction comprises a non-black color layer attached to a black intermediate layer, and further wherein an adhesive layer is located on the black intermediate layer, the adhesive layer forming the back surface of the construction.
20. A backlit sign comprising :
 - an enclosure;
 - a sign face capable of having one appearance under light ambient lighting conditions, and another appearance when backlit and under dark ambient lighting conditions, the sign face comprising:
 - a substrate comprising a first surface and a second surface facing the enclosure;

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a film construction attached to the first surface of the substrate, the construction comprising:

a front surface and a back surface facing the first surface of the substrate, the construction comprising a thickness between the front surface and the back surface;

a plurality of perforations distributed over the construction, wherein each perforation of the plurality of perforations transmits light through the construction, and further wherein each perforation of the plurality of perforations comprises a uniform cross-sectional area throughout the thickness of the construction; and

opaque land area separating the plurality of perforations;

wherein the plurality of perforations occupy about 10% to about 35% of the front and back surfaces of the construction, and wherein the reflective adhesive reflects at least about 50% of normal incident light directed at the land area of the back surface of the construction is reflected.

21. The sign of claim 20, further comprising a diffuser attached to the second surface of the substrate.
22. The sign of claim 20, wherein the substrate diffuses light transmitted therethrough.
23. The sign of claim 20, wherein at least about 80% of normal incident light directed at the land area on the back surface of the construction is reflected.
24. The sign of claim 20, wherein the film construction is adhesively attached to the substrate.
25. The sign of claim 20, wherein the opaque land area comprises an absorptive material that provides opacity by absorption of light incident thereon.

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26. The sign of claim 20, wherein the construction comprises color layer attached to a white intermediate layer, wherein the color layer forms the front surface of the construction and the white intermediate layer forms the back surface of the construction.
27. The sign of claim 26, wherein the color layer comprises a black film attached to the white intermediate layer.
28. The sign of claim 20, wherein the construction comprises a non-black color layer attached to a black intermediate layer, and further wherein an adhesive layer is located on the black intermediate layer, the adhesive layer forming the back surface of the construction.